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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/737,321 | 12/16/2003 | Thomas Braig | PO-7918/LeA 35,880 | 5943 |
| 34947 | 7590 | 09/07/2006 | EXAMINER | |
| LANXESS CORPORATION 111 RIDC PARK WEST DRIVE PITTSBURGH, PA 15275-1112 | | | POULOS, SANDRA K | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1714 | |

DATE MAILED: 09/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/737,321

Applicant(s)

BRAIG ET AL.

Examiner

Sandra K. Poulos

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 6/14/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

Information Disclosure Statement

1. The reference "Elektrisch leitende Kunststoffe" has not been considered because no translation has been made available.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 19 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear what "0 to 5%" and "more than 5%" are based on, for instance, weight percent of the total composition. Clarification is requested.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 6, 10 are rejected under 35 U.S.C. 102(b) as being anticipated by EP 1 052 654.

EP 654 discloses a composition containing (a) polyethylene, polypropylene, or mixtures thereof; (b) carbon nanotubes, (c) optionally a carbon black, and (d) a

copolymer of an acrylonitrile rubber or a silicone rubber (abstract). The carbon nanotubes are used in amounts of 1 to 35 parts by weight (para 23). Conductive carbon black can be used in the range of 5 to 80 parts by weight (para 23). The end points of the ranges for (b) and (c) anticipate the present claims. Additives and fillers can be added in amounts ranging from 0.1 to 50 percent (para 30). Nitrile rubber (d) is present in an amount of 10 to 60 parts (para 26). Component (a) is added in an amount of 60-79% (para 41-43). The electroconducting shield made from the composition is prepared by and extruder (para 32).

Therefore, EP 654 anticipates the cited claims.

4. Claims 1-5, 7-12, 14,17-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Amarasekera et al (US 2002/0183438).

Amarasekera discloses a conductive polymeric composition containing 40-80 wt% of polymeric resin (para 14), 1-8 wt% carbon nanofibers with an aspect ratio of greater than or equal to 1000 (para 15), and 1-15 wt% conductive carbon black having a particle size of less than 200 nm, preferably less than 50 nm (para 19-20). Amarasekera discloses thermoplastics such as polyester, polyethylene terephthalate, polycarbonate, polyamides and blends of thermoplastics (para 11-12). Fibrous reinforcing fillers are present in an amount of 0-20 wt% (para 24-25, 29). Amarasekera discloses a composition of polycarbonate resin (which is a polyester, see Injection Molding Handbook reference) with 3 wt% carbon fibers and 10 wt% carbon powder that produces a surface resistivity of 10^5 Ohms (para 31). A combination of thermoplastics,

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namely polyamide and PPE are used in Example 1 (para 40). The composition is added to an extruder and pelletized, the pellets are molded (para 36-37). Conductive compositions made in this manner are useful in electromagnetic shielding, automotive applications, etc (para 38).

For the above, examiner has converted from parts by weight (the units in the current claims) to weight percent of the total composition (units in Amarasekera) by calculating the minimum and maximum value that each component in the claims could possibly have. Below are the ranges (in % by weight of the total composition).

| | claim 1 | | claim 2 | |
|---|---------|------|---------|------|
| A | 7.7 | 99.6 | 47.2 | 88.4 |
| B | 0 | 82.8 | 3.6 | 28.4 |
| C | 0.1 | 49.5 | 0.9 | 3.6 |
| D | 0.1 | 49.5 | 0.9 | 5.7 |
| E | 0 | 82.8 | 3.7 | 32.3 |

Therefore, Amarasekera anticipates the cited claims.

Claim Rejections - 35 USC § 102/103

5. Claims 19-20 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Amarasekera et al (US 2002/0183438).

The discussion with respect to Amarasekera in paragraph 4 above is incorporated herein by reference.

Although Amarasekera is silent with respect to the MVR of the composition, given that the composition satisfies the surface resistance requirements and contains the same components, it is examiner's position that although it is not specifically recited, the composition in Amarasekera would nonetheless inherently meet the requirements for the currently claimed MVR, or alternatively, would obviously have been present in the Amarasekera product, absent evidence to the contrary.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 13 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amarasekera et al (US 2002/0183438) as applied to claims 1-3, 5, 7-12, 14, 17-18 above, and further in view of Miyoshi et al (US 2003/0134963).

The discussion with respect to Amarasekera in paragraph 4 above is incorporated herein by reference.

Amarasekera does not disclose applying a lacquer electrostatically to a molded article or the above composition.

Miyoshi discloses a composition containing thermoplastics (polyamide, polyphenylene ether), an electrically conductive filler (carbon black, carbon nanotubes, carbon fibers), and an impact modifier (abstract; para 108-115). Additives include inorganic fillers and other thermoplastics (polyester) (para 130). The composition is particularly suitable for exterior automobile parts which are to be subjected to electrostatic coating (para 139). It would have been obvious to one of ordinary skill in the art to electrostatically coat the molded article of Amarasekera in order to improve surface appearance of the molded product (para 2-3, 5-7, 22-23).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

JP 59-210957, JP 02-077442, and JP 09-087417 disclose thermoplastic resin compositions with carbon black and carbon fiber.

US 2003/0199607 discloses a polyamide resin with 0.05-15 wt% carbon black and 5-60 wt% carbon fiber.

US 2004/0167264 and US 2004/0167268 disclose conductive thermoplastic resin compositions with carbon black.

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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sandra K. Poulos whose telephone number is (571) 272-6428. The examiner can normally be reached on M-F 8:00-4:30 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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